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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,037

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David Charles Lyons

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FAEGRE & BENSON, LLP
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EXAMINER

PRICE, CARL D

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/718,037		LYONS ET AL.	
	Examiner		Art Unit	
	CARL D. PRICE		3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE
3 MONTH(S) FROM

THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/25/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-17 and 19-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) 1-7,9-17 and 19-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/01/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-7, 9-17 and 19-27 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

The indicated allowability of claims 9-12 is withdrawn in view of the newly applied reference(s) to **GB002262338 (Hess)**. Rejections based on the newly cited reference(s) follow.

Applicant has amended the claims to be of a scope not previously considered. Consistent with applicant's argument that the prior art relied on in the previous office action fail to show, disclose and/or teach certain aspects of applicant's invention now recited in the claims filed on 05/25/2006, applicant has amended the claims to include for example the following:

- a control system positioned in the fireplace and operably connected to the backlighting system; and
- a sensor positioned in the combustion chamber and operably coupled to the control system, wherein the sensor senses a state of the fireplace and the control system controls the backlighting system depending on the state of the fireplace.

The prior art reference of **GB002262338 (Hess)**(of record) s now relied on to address the limitations of the invention now recited in the claims. Most notably **GB002262338 (Hess)** discloses providing for the enhanced realistic appearance of flames produced by a simulated gas or electric fireplace by providing additional ambient light effects in response to sensed light intensity within the fireplace (see Figure 6 and page 9, line 28 - page 10, line 4). See the examiner's statement of rejection of the claims below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-17 and 19-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **GB 2261942 (Morley et al)** or **US002445250 (Steingruber)** and **GB002262338 (Hess)** (all of record).

GB 2261942 (Morley et al) shows and discloses an apparatus comprising:

- an enclosure (6) defining a combustion chamber (at 12, 20, 22, 30, etc.) and an open front (at 5), the enclosure including at least a lower panel (e.g. – 9, 10) and a back panel (6, 29, 30) having a surface lattice structure defined by a mottled or patterned surface forming recesses and projections according to the following found on page 6, last paragraph – page 7, line 4 and page 9:

The reflectors 29 and 30 are constructed from stainless steel sheet material having a mottled or patterned surface produced by deformation of the sheet to form series of raised portions and depressions extending over the whole surface of the sheet. The deformations are preferably of generally diamond shape and of uniform size having a major dimension of around

While in the illustrated embodiment the reflector members 29 and 30 are of mottled or patterned form, they may be of plain construction if desired. The reflectors may also be formed from reflective sheet material other than stainless steel and the surface deformations may be of circular, random or other shape and of various sizes dependent on the visual effect required. Moreover while the light units are preferred to enhance the overall effect, either or both may be omitted if desired. The mottled or patterned reflector means may also be employed in fires of different construction and incorporating different forms of live fuel effect assembly.

- a burner (8) positioned adjacent to the lower panel;
- a simulated log set (20) positioned adjacent to the burner; and
- a backlighting system (25) positioned between the log set and the back panel of the enclosure, the system including a light source (25) to shine light upon components of the fireplace including at least the back panel;
- wherein the enclosure includes a lower panel defining an opening (27 adjacent 17) in a back lower panel portion of the combustion chamber, and
- wherein the light source is positioned at least partially below the lower panel so that the light from the light source shines through the opening into the combustion chamber. Note the discussion at on page 6, last paragraph – page 7, line 4 and page 9 partially reproduced herein above. And, in regard to claims 8, 11, 18, 23 and 24, when a natural fire is being simulated within the fireplace the light bulb is turned on.

US002445250 (Steingruber) shows and discloses an apparatus comprising:

- an enclosure defining a chamber (3); and
- a backlighting system positioned at a back portion of the enclosure and including at least one light source (64) to shine light upon any components within and of the chamber, such as on the “lattice” structures formed by the louvers (37) and “lattice” surfaces defined by corrugated wall surfaces (38; see column 4, lines 60-65):
- wherein the enclosure includes:
 - o a lower panel (i.e. – the lower most and lower rear of panel) defining an opening (41 at 52; or, 59 at 62) in the back portion of the combustion chamber, and
 - o wherein the socket mounted bulb light source is positioned at least partially below the lower panel so that the light from the light source shines through the opening into the combustion chamber (see column 5, line 70- column 6, line 2, and column 8, lines 13-31: “The lamp 64 is positioned below the louvers 37 so that the light rays from the lamp will be directed against the lower surfaces of the louvers and reflected forwardly through the reflector shell 33, thereby creating the illusion of an open flame when the heater is viewed from the front”); and
 - o wherein the backlighting system is automatically controlled by the “fireplace” depending on a state of the fireplace. That is, automatically when the manually controlled switch simultaneously turns on with the lamp and heater. When a natural fire is being simulated within the fireplace (applicant’s claim 11).

GB 2261942 (Morley et al) or **US002445250 (Steingruber)** show and disclose the invention substantially as set forth in the claims with possible exception to:

- a control system positioned in the fireplace and operably connected to the lighting system;
- a sensor positioned in the combustion chamber and operably coupled to the control system, wherein the sensor senses a state of the fireplace and the

control system controls the backlighting system depending on the state of the fireplace; and

- the type and number of light bulbs, the type of socket material, and the dependence or inter-dependence of operating the illumination lamp system and burner fire system relative to each other.

GB002262338 (Hess) teaches, form applicants same simulated gas fireplace field of endeavor, providing a fireplace enclosure with a control system (figure 4) positioned in the fireplace and operably connected to one or more lamps (26, 27) of a lighting system), and a sensor(s) (S1, S2, S3) positioned in the combustion chamber and operably coupled to the control system, wherein the sensor senses a state of the fireplace and the control system controls the backlighting system depending on the state of the fireplace.

GB002262338 (Hess) discloses the following:

- Flame source 14 can either produce real flames, as would be produced from a gas fireplace, or illusory flames, as would be produced by an electric fireplace. For gas fireplaces, the flame producing apparatus could comprise gas inputs and nozzles (not shown) as known in the art. For electric fireplaces, the flame producing apparatus could comprise light sources and reflectors” (not shown) as known in the art. **(page 3, second paragraph)**
- “Display lighting 26 is used to illuminate simulated fuel bed 20 and to enhance the reflected image in screen 22. Display lighting 26 comprises one or more lamps 27 positioned along an upper front section of housing 12. The wattage of lamps 27 is preferably 15 watts but can be as low as 7 watts or as high as 25 watts when installed with a dimmer switch. Control circuit 29 controls the operation of the lamps 27 to enhance the simulated fireplace effects by providing ambient fireplace effects. **(beginning page 4, line 25)**
- “The light intensity threshold of each light flickering device 16a, 16b, and 16c can be individually adjusted by varying the appropriate circuit parameters of the appropriate control circuit 29a, 29b, and 29c for optimal performance and visual effectiveness. Accordingly, a more effective ambient lighting effect can be produced using multiple light flickering devices 16a, 16b, and 16c. The position and number of display lamps 27a, 27b, and 27c and photo

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sensors S1, S2 and S3 can be varied as desired to optimize the ambient flame effect within the desired cost parameters. (page 6, line 13- 21)

- “As will be described, control circuit 29 causes the hot wire voltage at terminal LINE to appear at terminal LAMP1 to power display lamp 27 when a relatively bright light condition is detected by photocell S1 and causes low voltage to appear at terminal LAMP1 which turns display lamp 27 off when a relatively low light condition is detected. (page 6, line 30- page 7, line 3)
- “While Fig. 4 illustrates the operation of one photo sensor S1 in association with one display lamps 27 and one control circuit 29, it should be understood that a plurality of photo sensors S1 and/or a plurality 10 of display lamps 27 could be used in association with one or more control circuits 29 to optimize the flame effect within the desired cost parameters.

It should be further understood that the embodiment of control circuit 29 can be manufactured at a relatively low cost. However, it would also be possible to modify control circuit 29 at a higher cost, to provide additional functionality. For example, display lamps 27 could be caused to provide light in proportion to the light sensed, by using an appropriately programmed microcontroller and timer circuit (e.g. a Motorola 6800 microcontroller and a Model 555 timer) which together could control the on/off operation of triac Q1. As is conventionally known, by regulating the amount of time that triac Q1 conducts, it is possible to vary the amount of current provided to lamps 27 between dim and full lamp current values.

A lower cost embodiment can be constructed in which no photo sensors are provided and the display lamps 27 are caused to flicker in a random manner by use of an appropriately programmed microcontroller. The frequency of flickering can be adjusted through either through the light dimmer or the speed control for the flame effect.

Finally, as shown in Fig. 6, light flickering device 16 can be adapted for use within a gas fireplace. Specifically, photo sensor S1 can be mounted on the inner surface of a lip 50 (as shown in dotted outline) within housing 12 such that photo sensor S1 is hidden from view by lip 50.

Photo sensor S1 is also preferably positioned at a distance from flame source 14 such that photo sensor S1 is exposed to a level of heat which does not affect the operation or physical integrity of photo sensor S1.”(page 9, line 7- page 10, line 4)

In regard to claims 1-7, 9-17 and 19-27, for the purpose of providing for the enhanced realistic appearance of flames produced by a simulated gas or electric fireplace by providing additional ambient light effects in response to sensed light intensity within the fireplace, it would

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have been obvious to a person having ordinary skill in the art to modify the lighting systems of either **GB 2261942 (Morley et al)** or **US002445250 (Steingruber)** to include a control system positioned in the fireplace and operably connected to one or more lamps of the lighting system, and a sensor(s) positioned in the combustion chamber and operably coupled to the control system, wherein the sensor senses a state of the fireplace and the control system controls the backlighting system depending on the state of the fireplace, in view of the teaching of **GB002262338 (Hess)**. Also, noting that the bulb of **GB 2261942 (Morley et al)** or **US002445250 (Steingruber)** is capable of operating within operating temperature ranges of the heater, to select the properties of the light source to withstand high temperature generated by the simulated fire fireplace is deemed an obvious design expedient since the light source would necessarily be capable of withstanding high temperatures generated by the fireplace in order to operate as intended. Also, in regard to claim 6, 7, Official Notice is taken that a halogen bulb having a ceramic sockets (see CA2385446 (Bereg) cited) are well known in the illumination field of endeavor. Additionally, in regard to claims 5 and 6, since the type and number of light sources and socket material used would depend on numerous design concerns such as the desired amount and distribution of light, the relative intensity of the light, the size and shape of the chamber, the location of the light source with regard to the chamber openings, etc., to use plural bulbs and to select a halogen bulb having a ceramic sockets can be viewed as nothing more than a mere matter of choice in design absent the showing of any new or unexpected results produced there from over the prior art of record.

In regard to claims 10, to operate the light bulb and/or the burner produced fire independently each for their separate purpose, would have been obvious to a person having ordinary skill in the art since the operation of the lamp bulb for illumination and operation of the burner to produce heat are necessarily dependant on the each other.

In regard to claims 13 and 27, for example, the proposed combination of teachings **GB 2261942 (Morley et al)** or **US002445250 (Steingruber)** and **GB002262338 (Hess)** would be recognized as capable of permitting the photo sensor to turn on and off the lighting system depending on an amount of light outside the fireplace. That is, since the fireplace front is open to ambient light originating outside the fireplace the sensor located within the fireplace enclosure is capable of responding to outside light, depending on the amount of light is sufficient to affect the sensor.

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In regard to claim 14, the light intensity threshold of each light flickering device 16a, 16b, and 16c of **GB002262338 (Hess)** can be individually adjusted by varying the appropriate circuit parameters of the appropriate control circuit 29a, 29b, and 29c for optimal performance and visual effectiveness, which is deemed the structural and functional equivalent to applicant's broadly claimed "manual control".

Conclusion

See the attached USPTO FORM 892 for prior art made of record and not relied upon but which is considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CARL D. PRICE

Primary Examiner

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